

Fracking Infrastructure is Carving Up Pennsylvania

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The Marcellus Shale lies beneath much of the Allegheny Plateau, which boasts the largest unbroken expanse of forest in Pennsylvania.¹ Drilling and fracking for shale gas in the Marcellus region is fragmenting the state's forests with each new road, well site and pipeline. Absurdly, proponents of shale gas development argue that pipelines can benefit landowners by providing new recreation areas and better habitat for wildlife. These arguments would be laughable if they weren't so emblematic of the oil and gas industry's insidious greenwashing efforts.

Pipelines Threaten Wildlife

In the Marcellus region of Pennsylvania, over 7,000 wells have been drilled, with multiple wells sometimes drilled from the same site, called a well pad.² A typical well pad uses around 2.5 acres of land, but pads can range up to nearly 50 acres.³ Around half of all well pads in Pennsylvania are in forested lands.⁴ About a quarter of them were built by leveling core forest, which is forest that is more than 300 feet from a road or other clearings that form a forest edge.⁵ In these forested areas of the Marcellus, each well pad consumes an average of 30 acres of core forest, including forest cleared for the well pad itself, forest cleared for pipelines and roads, and loss of core forest due to creation of new forest edges.⁶

As drilling and fracking for shale gas continue, an estimated 60,000 miles of new pipelines could be constructed in Pennsylvania alone to connect new well pads to customers.⁷ Depending on the size of the pipeline, construction requires a continuous cleared path 30 to 200 feet wide.⁸ These clearings cut through essential core forest habitats, creating migration barriers for small animals and amphibians, opening up the land to invasive species and industrial pollution, and damaging water quality.⁹

Construction of pipelines and well pads can damage small streams or springs that, while ostensibly protected by law, are easily overlooked.¹⁰ Clearing trees and bushes to construct pipelines that cross streams can increase the water's temperature, making it too warm for fish to forage or raise their young.¹¹ Stormwater runoff during pipeline construction, as well as the inevitable leaks and spills of contaminants from



well pads, can reduce populations of fish and other aquatic species in the area and downstream.¹² Risks to surface water are widespread in the Marcellus shale region, where linear projects like a natural gas pipeline have to cross a stream around every 2,000 feet, compounding the risks to freshwater sources and wildlife.¹³

While construction phases for a well pad or pipeline are temporary, their effects are not. Legal agreements between landowners and pipeline companies require that landowners keep the area clear, meaning that forests remain fragmented.¹⁴ Not only does this result in less forest cover for wildlife habitat, but it also results in worse habitat: more fragmentation means that more forest is close to an edge, where many species are more vulnerable.¹⁵

Pipeline supporters have argued that species actually benefit from fragmentation because they rely on small openings in forests for food, but the reality is that the new forest edges can instead form an “ecological trap.”¹⁶ In some cases, individual raccoons, deer or opossums can benefit from new foraging areas, but the clearings also attract predators that reduce the survival rate of their young.¹⁷

Many animals, like the rare northern flying squirrel and some rare salamanders, require specific habitats like core forest and freshwater seeps, so they cannot cope with habitat disturbance.¹⁸ The rare Appalachian cottontail rabbit and the ruffed grouse likewise require unfragmented landscapes.¹⁹ And Pennsylvania is home to a huge population of songbirds that rely on core forests: over 19 percent of the world’s scarlet tanager population and 9 percent of the world’s wood thrush population rely on Pennsylvania core forest.²⁰ Right now, we risk losing the native species that make our forests so unique.²¹

Threats to the Public

In addition to problems that pipelines pose for wildlife, pipelines can put human lives at risk, and rural pipelines are often overlooked. In November 2013, an entire town in Texas had to evacuate after a drilling crew accidentally hit a pipeline carrying natural gas liquids, causing an explosion.²² In Pennsylvania, the extent of existing underground natural gas pipelines is unknown, making pipeline accidents more likely.²³ It is ironic, then, that supporters of natural gas development claim that the miles of rural pipeline paths are beneficial as hiking, cross-country skiing or snowmobiling trails.²⁴

For landowners, pipelines can also reduce the value of real estate. The equipment needed to construct the pipeline, such as heavy trucks, compacts the soil and can affect the ability of trees and even crops to grow for years afterward.²⁵ Damage from construction can reduce land value due to lost crops, reduced value of nearby homes and buildings, and risk of leaks and explosions.²⁶

The drilling and fracking rush is splintering forested landscapes and committing us to ecological degradation and climate pollution for years to come. New shale gas pipelines are an emblem of corporate sovereignty over public safety and profit over sustainability. These pipelines pose long-term risks to humans and harm to ecosystems, and give us one more reason to ban fracking now.

Endnotes

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